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NATIVE WILD ASTERS

BY

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A THESIS SUBMITTED FOR THE DEGREE OF

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The study of the Wild Aster in Wisconsin has played an interesting role in the general history of Aster study chiefly because of the comparatively large number of species which are native to this state. The earliest references to Wisconsin flora were made by French explorers, missionaries or travellers. These references dealt chiefly with such plants as were conspicuous in the landscape or those which served some use such as that of food, medicine, clothing, or shelter. Mention of Asters was not found in any of these early records.

The first work of a scientific nature was that of Thomas Nuttall, an English naturalist who travelled up the Great Lakes and across Wisconsin territory by way of the Fox and Wisconsin rivers and thence down the Mississippi river. In his "Genera of North American plants", 1818, we find enumeration of the following Asters:

#Aster corymbosus Ait (A. divaricatus L.)

Aster macrophyllus L.

Aster sericeus Vent.

Localities are not definitely assigned, but in view of the fact that Aster macrophyllus has often since been reported along the Wisconsin river valley, particularly in Sauk County; and Aster divaricatus and Aster sericens are found rather

#In this and following lists I have inserted, in parenthesis, the synonyms of the name listed, commonly used at the present time.

commonly in the state, it is probably safe to assume that Nuttall's collections contained Wisconsin Asters.

In 1820, Governor Cass of Michigan Territory explored along the Great Lakes and crossed Wisconsin by way of the Wisconsin and Fox rivers. Professor D. B. Douglass of West Point Military Academy accompanied him as naturalist. His botanical collections were sent to Dr. John Torrey, of New York, who identified and named them, publishing the list in Silliman's Journal (Vol. IV, p. 56, 1822). This list contains no mention of Asters.

In 1823 another expedition set out, results of which are told in "Narrative of an Expedition to the Source of the St. Peters River, etc., Under Command of Major Stephen H. Long" by W. H. Keating. The expedition started at Chicago, entered south-western Wisconsin near Pecatonica River and crossed the Mississippi river at Prairie du Chien. Mr. Say, zoologist, took the place of the botanist who had been detained. Plants collected were sent to Lewis De. Schweinitz for identification. Asters listed were as follows:

88. *Inula amygdalina*, Nutt. Gen. II, p. 153.
Aster amygdalinus auctoreum (form of umbrellatus)
 Not rare in the United States.
89. *Aster ledifolius*, Pursh, p. 544.
 (Syn.) *Aster nemoralis*, Nutt. p. 154.
 "The present specimen of this elegant aster is more ciliately scabrous than my jersey ones."
90. *Aster multiflorus* ? Pursh.
 "A small indistinct branch only, which, however, exactly resembles one communicated to me by the above name from Dr. Muhlenberg, except, in being scabrous."
91. *Aster puniceus*, Pursh. p. 554.
 Common in the United States.
92. *Aster laevigatus*, Pursh. p. 553 (*A. laevis*).
 Common in the United States.

In 1831, Henry Rowe Schoolcraft, government Indian agent of Detroit, went on an expedition through western and northwestern Wisconsin. Dr. Douglas Houghton accompanied him as surgeon and naturalist. The expedition kept to the south shore of Lake Superior, to the mouth of the Bad River, now in Ashland County, down White River and Long Lake, in the southern part of Bayfield County, thence into the Nemacogon river and into the St. Croix. They then crossed to the Yellow river and reascended to a point near the center of what is now Washburn County, portaged to Red Cedar river, down the Chippewa and Mississippi rivers to Galena. On the return trip the expedition passed, cross country, through Dane, Columbia, Marquette, and Green Lake counties to the Fox river and thence to Lake Michigan. The next year they again skirted the south shore of Lake Superior to its western border. The results of the journey were published, in 1834, in "Narrative of an expedition through the upper Mississippi to Itasca Lake, the actual source of that river in 1832", New York, 1834, pp. 160-165. In all, two hundred and seventy-four plants are listed among which we find:

Aster tenuifolius (A. *Tradescanti* or A. *Paniculatus*) Willdenow. Upper Mississippi.
Aster sericea, Nuttall. River de Carbeau, Missouri Territory.
Aster laevis ? Willdenow. St. Croix River, Northwest Territory.
Aster concolor, Willdenow. Fox River, Northwest Territory.
Aster (N. Spec.) Sources of Yellow River, Northwest Territory.

In 1835, Mr. John L. Riddell, of the Historical and Philosophical Society of Ohio, published a "Synopsis of the Flora of the Western States". The region covered included a narrow strip

of the southern border of Wisconsin, but no plants were definitely assigned here, and so I have omitted his list of Asters.

Increase A. Lapham settled in Milwaukee in 1836 and began his work there. He published the same year, "A Catalogue of Plants and Shells found in the Vicinity of Milwaukee on the west side of Lake Michigan. Milwaukee, W. T., 1836." The list of Asters follows:

Aster nova-angliae
Aster macrophyllum
Aster novi-Belgii
Aster Shortii

In 1838, a "Catalogue of Plants Found in the Vicinity of Milwaukee, W. T.", by the same author, was printed at the Advertiser office. This list included:

Aster amygdalinus (form of A. umbellatus)
nova-angliae
macrophyllus
punicens
novi-Belgii
Shortii

In November, 1840, a supplementary list was published.

This added:

Aster ledifolius (A. nemoralis)
sericeus
laevis
cordifolius
corymbosum (A. divaricatus)

Again in 1844 in "Topographical and Geographical Description of Wisconsin" (Milwaukee, Wis. 1844, p. 77) we find another list by Lapham.

Aster sericeus Vent.
azureus Lindl.
Shortii Hook.
laxifolius Nees (A. junceus)
ptarmacoides (Torr. & Gray) chrysopsis alba Nutt.

Donald McLeod published in Buffalo, New York, 1846, a

"History of Wisconsin From its First Discovery to the Present Time." The work includes a catalogue of plants which contains the lists given by I. A. Lapham in 1838 and 1840.

The list next in order is that of Dr. C. C. Parry, "A Systematic Catalogue of plants of Wisconsin and Minnesota", which was made in connection with David Dale Owen's (United States geologist) "Geological Survey of the Northwest" during the season 1848. Twelve species of Aster are named:

Aster macrophyllus L. copes. Common throughout the northwest.

Aster sericeus Vent. August. Dry prairies, Iowa, Barrens of St. Croix. A characteristic and handsome species with silvery foliage and rich purple flowers.

Aster laevis L. August. Dry woodlands. Common.

Aster azureus Lindl. August. Dry hillsides, Iowa and Minnesota.

Aster cordifolius L. August. Thickets. St. Croix.

Aster sagittifolius Willd. August. Falls of St. Croix.

Aster multiflorus Ait. September. Dry fields. Iowa.

Aster miser Ait. (*A. lateriflorus*). August. Thickets. St. Croix.

Aster punicens L. September. Moist ground. St. Croix.

Aster laxifolius Nees. (*A. junceus*). August. Bogs, St. Croix.

Aster oblongifolius Nutt. June. Rocky banks of the Mississippi, near Davenport, Iowa.

Aster ptarmicoides. Torr. & Gr. August. Dry river bluffs. Mississippi and St. Croix.

In 1853, Lapham again published a list of Asters with additions to the same in 1860. Specimens were all found in Milwaukee County unless otherwise indicated.

Aster Linn. (Starwort)

macrophyllus Linn.

sericeus Vent.

concolor Linn. Neenah River, Dr. Houghton

laevis Linn.

azureus Lindl.

Shortii Boott.

sagittifolius Willd.

Aster multiflorus Ait.
miser Linn. (*A. lateriflorus*)
tenuifolius Linn. (*A. Tradescanti* or *A.*
paniculatus). Upper Mississippi, Dr. Hough-
 ton.
praealtus Poir. (*A. salicifolius*)
laxifolius Nees. (*A. junceus*)
puniceus Linn.
preanthoides Muhl.
oblongifolius Nutt. Upper Mississippi. Torr.
 & Gray.
novae-angliae Linn.
ptarmicoides Torr. & Gray

T. J. Hale, a student at the University of Wisconsin,
 covering the territory of Dane County, Wisconsin valley west to
 Arena, the Rock and Sugar river valleys, the Dells of Wisconsin,
 Lake Winnebago, Fox river, Penokee Iron ridge, Lake Superior at
 La Pointe, Upper Mississippi valley and points along Lake
 Michigan between Milwaukee and Manitowoc, covered those listed
 by Lapham in 1853 and 1860 adding to the lists only one form:

Aster ericoides. L.

In 1876, a Swiss Catholic priest, Thomas A. Bruhin, settled
 in New Coeln, Milwaukee County, and later moved to St. Wendelin,
 Sheboygan County. He compiled a list of plants which, according
 to Gray's and Wood's Manuals, might ordinarily be found in
 Wisconsin. His lists were published in 1876 and 1877 in Vienna
 under the titles "Vergleichende Flora Wisconsins" and "Nachträge
 und Berichtigungen zur Vergleichender Flora Wisconsins" (Verh.
 d. Zoo. Bot. Gesells. Wien. Bd. XXVI, p. 229, and Bd. XXVII).
 The lists follow. Those marked with a dagger were believed,
 by him, to have been collected in Milwaukee and Lake Towns.

Aster corymbosus Ait. (*A. divaricatus*). "Common".
 Gray.
macrophyllus L. "Common northward". Gray.
 (Bei St. Wendelin schon verblüht, als ich
 sie fand; nach dem Blatt zu schlüssen aber
 doch diese Art).

Aster sericeus Vent. "Wisconsin" nach Gray.
laevis L. var. *Cyaneus*. "Common northward",
 nach Gray.
azureus Lindl. "Wisconsin" nach Gray.
Shortii Boot. "Wisconsin" nach Gray und Wood.
undulatus L. Milwaukee County. -
cordifolius L. Daselbst. -
ericoides L. "Wisconsin" nach Gray.
multiflorus Ait. "Common" nach Gray.
dumosus L. "Common". Gray.
Tradescanti L. (*A. vimineus* in 5th Ed. of
 Gray's Manual) "Very common." Gray.
miser L. (*A. lateriflorus*) "Very common and
 variable." Gray.
simplex Willd. (*A. paniculatus*) "Common."
 Gray and Wood.
tenuifolius L. (*A. Tradescanti* or *A. panicu-*
latus) "Wisconsin", nach Gray.
carneus Nees. (*A. paniculatus* or *A. salici-*
folius) "Common". Gray.
aestivus Ait. (*A. junceus*) "Wisconsin",
 nach Gray.
puniceus L. Eine Meile oestlich von New
 Coeln. -
prenanthoides Muhl. "Wisconsin" nach Gray.
oblongifolius Nutt. "Wisconsin" nach Gray.
amethystinus Nutt. "Wisconsin" nach Gray.
novae-angliae L. "Common". Gray.
graminifolius Pursh. (now placed in
Erigeron.) "Lake Superior". Gray.
ptarmicoides, Torr. & Gr. "Wisconsin" nach
 Gray.
angustus Torr. et Gr. "Near the borders of
 Wisconsin". Gray.
Diplopappus linariifolius Hook. (*Aster linarii-*
folius) "Common". Gray.
umbellatus Torr. et Gr. (*Aster umbell-*
atus) "Common". Gray.

About the same time, Professor Herbert E. Copeland,
 formerly of Indianapolis, then of Monroe, Wisconsin, wrote of
 flora at the Dells of Wisconsin.

"Compositae were not at all abundant, but we
 notice *Liatris cylindracea*, Michx., and *Aster*
aestivus, Ait., (*A. junceus*) on the rock opposite
 Gates' Ravine." (Bot. Gaz. Vols. 1 & 2, pp. 54
 and 63.)

In 1876, Mr. Thure Kumlein, writing concerning the dis-
 appearance of our wild plants on the prairies near Lake
 Koshkonong, speaks of *Aster obtusifolius* and *Aster ptarmicoides*

as being forms which have survived the inroads of civilization.
(Trans. Wis. Acad. of Science. Vol. 3, pp. 56-57. 1875-76.)

Mr. G. D. Swezey, an Instructor in Natural History at Beloit College, completed a compilation of a list from other lists of plants under the title, "Catalogue of Phaenogamous and Vascular Cryptogamous Plants of Wisconsin." (Geol. of Wis. Vol. I, p. 376. 1883.) His list of Asters follows:

Aster corymbosus Ait. (*A. divaricatus*)
macrophyllus Linn.
sericeus Vent.
concolor Linn.
patens Ait.
laevis Linn.
azureus Lindl.
Shortii Boott.
undulatus Linn.
cordifolius Linn.
sagittifolius Willd.
ericoides Linn.
multiflorus Ait.
dumosus Linn.
Tradescanti Linn.
miser Linn., Ait. (*A. lateriflorus*)
simplex, Willd. (*A. paniculatus*)
tenuifolius Linn. (*A. Tradescanti* or
A. paniculatus)
carneus Nees. (*A. paniculatus* or *A. salicifolius*)
aestivus Ait. (*A. junceus*)
longifolius Lam.
puniceus Linn.
puniceus var. *vimineus* Gray
prenanthoides Muhl.
oblongifolius Nutt.
amethystinus Nutt.
novae-angliae Linn.
ptarmacoides Torr. & Gray
Diplopappus linariifolius Hook. (*A. linariifolius*)
umbellatus Torr. & Gray (*A. umbellatus*)
amygdalinus Torr. & Gray (form of
A. umbellatus)

The "Proceedings of Wisconsin Pharmaceutical Association" for 1885 gives in "Queries" a "Synopsis of the flora of some of the larger cities in Wisconsin", by Mr. Adam Conrath, dealing particularly with Milwaukee. He states that, due to

limited time, the list is not complete. Under Asters he lists only three forms:

Aster sagittifolius Willd.
Aster Tradescanti L.
Aster puniceus L.

"The Flora of Milwaukee County" (Proc. of Nat. Hist. Soc. of Wis., April 1889), a paper published in 1888, with Supplements in 1889, by Dr. W. M. Wheeler, then curator of the Milwaukee Public Museum, gives the following list of Asters:

Aster corymbosus Ait. (*A. divaricatus*). On the Banks of the Milwaukee River.
A. macrophyllus L. Scattered through the country.
A. laevis L. Like the last.
A. undulatus L. Milwaukee County (Bruhin).
A. cordifolius L. Abundant, especially at Whitefish Bay.
A. sagittifolius, Willd. Found by Mr. A. Conrath in the county.
A. Tradescanti L. Like the last.
A. longifolius L. Whitefish Bay.
A. puniceus L. Common throughout the county.
A. prenanthoides Muhl. Whitefish Bay.
A. novae-angliae L. Abundant near the cement work, where a few specimens of the var. *roseus* were also found.
A. ptarmacoides T. & G., near Larkin's tamarack swamp.
A. angustus, T. & G. In the streets of the city.

In the supplemental paper, 1889, he adds:

Aster miser Ait. (*A. lateriflorus*). Common in various parts of the county.
Aster simplex. Willd. (*A. paniculatus*). In Larkin's tamarack swamp.

In this paper, Dr. Wheeler acknowledges the assistance of Mr. F. Runge and Mr. Conrath.

The next list of interest is that of Mrs. Clarissa Tracy of the Botany Department of Ripon College, 1889. "Catalogue of plants growing without cultivation in Ripon and near vicinity."

Aster L.

corymbosus, Ait. (*A. divaricatus*)
 cordifolius, L.
 sagittifolius, Willd.
 azureus, Lindl.
 Shortii, Hook.
 sericeus, Vent.
 squarrosus, Walt.
 laevis, L.
 patens, L.
 novae-angliae, L.
 puniceus, L.
 prenanthoides, Muhl.
 novi-Belgii, L.
 longifolius, Lam.
 ericoides, L.

"A Preliminary Paper on the Flora of Dane County, Wisconsin" by L. S. Cheney and R. H. True, in 1893, appeared in the "Transactions of Wisconsin Academy of Science, Arts and Letters". Sixteen species of Asters were listed.

Aster L. Starwort, Aster

- A. *Novae-Angliae* L. Low wet pastures. Very common.
- A. *sericeus*, Vent. Growing on dry rocky points about Madison. Local.
- A. *azureus* Lindl. On sandy or gravelly soil. Not common.
- A. *sagittifolius*, Willd. Dry grounds throughout region. Common.
- A. *turbinellus*, Lindl. (According to Monroe, this was incorrectly labelled and was a specimen of *A. laevis*.) Common on dry soil.
- A. *laevis* L. Dry gravelly or sandy places. Not common.
- A. *multiflorus*, Ait. Not uncommon in dry soil along fences and in copses.
- A. *diffusus*, Ait., var. *hirsuticaules* (*A. lateriflorus*) Gray. Everywhere common in fields and thickets.
- A. *Tradescanti* L. Low grounds, not rare.
- A. *paniculatus*, Lam. Common in low lands.
- A. *longifolius*, Lam. of Gray's Manual, 6th ed. Growing in rich lowlands. Rather common.
- A. *novi-Belgii* L. Occurring occasionally throughout the region. (According to Monroe, this specimen should have been labeled *A. longifolius*.)
- A. *puniceus* L. Low thickets and swamps. Very abundant.
- A. *umbellatus* Mill. Low moist thickets. Not rare.
- A. *linariifolius* L. Sandy hillsides west of Madison. Rare.
- A. *ptarmicoides*, Torr. & Gray. Dry hills about Madison. Rather local.

In the same year, 1893, Mr. Cheney published a short note by Mr. F. F. Wood, principal of the High School at Barron (Trans. of Wis. Acad. of Sciences, Arts and Letters). This stated that *Aster macrophyllus* L. was found at Fond du Lac, Grand Marais, Grand Portage, Granite River and Basswood Lake.

Hermann F. Lueders published, in 1895, a paper (Trans. of Wis. Acad.) on "The Vegetation of the Town of Prairie Du Sac."

Aster grandiflorus L.
oblongifolius Nutt.
novae-Angliae L.
sericeus Vent.
azureus Lindl.
sagittifolius Willd.
laevis L.
multiflorus Ait.
dumosus L.
diffusus Ait. (*A. lateriflorus*)
Tradescanti L.
longifolius Lam.
puniceus L.
umbellatus Miller
linariifolius L.
ptarmicoides T. & Gr.

Mr. W. J. Bennetts, in bulletins of the Wisconsin Natural History Society, added to the lists of Dr. W. M. Wheeler. In July 1900:

Aster azureus Lindl. In Menomonee Valley and along Milwaukee River.
A. Shortii Hook. With the last in Menomonee Valley and northwest part of country.
A. lowrieianus Porter. Common around Milwaukee along with *A. cordifolius* which it much resembles.

In January of 1902 he adds:

Aster ericoides L. In Section 6, Town of Greenfield near Waukesha County line and near Cement Works along C. & N.W. Railway.

In 1907 Mr. Howland Russel published a bulletin of the same society under the title, "Check List of the Flora of Milwaukee County". Nomenclature is the same as in Gray's New Manual. Where this differs from Britton's second edition

synonyms are printed in italics.

- Aster divaricatus* L. White Wood Aster. Banks of Milwaukee River.
- A. leptocaulis* Burgess. Smooth-stemmed Aster. Lake Woods and Whitefish Bay.
- A. macrophyllus* L. Large-leaved Aster. Throughout county. Locally abundant.
- A. Shortii* Hook. Short's Aster. Throughout northern part of county. Locally abundant.
- A. azureus* Lindl. Sky-blue Aster. Menomonee Valley and Milwaukee River. Occasional.
- A. cordifolius* L. Common Blue Wood Aster. Throughout county. Locally abundant.
- A. cordifolius* L. var. *laevigatus* Porter.
A. Lowrieanus Porter. Smooth Wood Aster. Throughout county. Common.
- A. sagittifolius* Willd. Arrow-leaved Aster. Reported by A. Conrath as found in county.
- A. Drummondii* Lindl. Drummond's Aster. Wauwatosa and Whitefish Bay. Locally abundant.
- A. undulatus* L. Wavy-leaved Aster. Whitefish Bay and New Coeln.
- A. novae-angliae* L. New England Aster. Near the Cement Works, at Lake Woods and Whitefish Bay. Locally abundant.
- A. puniceus* L. Red-stalk Aster. Throughout county. Common.
- A. puniceus* var. *lucidulus* Gray. Sec. 5, Greenfield.
- A. prenanthoides* Muhl. Crooked-stem Aster. Throughout county. Not uncommon.
- A. laevis* L. Smooth Aster. Throughout county. Abundant, especially north.
- A. junceus* Ait. Rush Aster. In western part of county. Locally abundant.
- A. longifolius* Lam. Long-leaved Aster. Whitefish Bay.
- A. ptarmicoides* (Nees) T. & G. Upland White Aster. Sec. 1, Greenfield.
- A. paniculatus* Lam. Panicked Aster. Banks of Milwaukee River.
- A. paniculatus* var. *simplex* (Willd.). Burgess, Sec. 1, Greenfield.
- A. Tradescanti* L. Michaelmas Daisy. Wauwatosa and Whitefish Bay. Occasional.
- A. ericoides* L. Frost-weed Aster. Cement Works on Milwaukee River. Sec. 6, Greenfield.
- A. lateriflorus* (L.) Britton. Starved Aster. Throughout county. Locally common.
- A. angustus* (Lindl.) T. & G. *Brachyactis angustus* (Lindl.) Britton. Rayless Aster. In waste places in city. Spreading.
- Doellingeria umbellata* (Mill.) Nees. Tall Flat-top White Aster. Menomonee Valley and Whitefish Bay. Locally abundant.

Mr. S. C. Wadmond, of Delavan, published a paper, in 1909, on "Flora of Racine and Kenosha Counties, Wisconsin; A List of the Fern and Seed Plants growing without Cultivation" (Trans. of Wis. Acad. of Sci., Arts and Letters). The list of Asters follows:

- Aster divaricatus* L. (*A. corymbosus* Ait). Rare; "Dr. Davis (Suppl. List of Parasitic Fungi of Wis. p. 157) reports collecting this as the host of an *Erysiphe*. The writer has not seen this Aster within our area."
- Aster macrophyllus* L. Common; woodlands.
- Aster Shortii*, Hook. Frequent; dry banks and wood borders.....
- Aster azureus* Lindl. Common; prairies.
- Aster cordifolius*, L. Rare; known to the writer from a single station only, fence-row in shade, Ives, Racine County.
- Aster Drummondii*, Lindl. Common; open woods and roadsides.
- Aster sagittifolius*, Willd. Rare; in thin soil underlain by limestone at Harlicksville quarries, Racine County. The only known station.
- Aster Novae-Angliae* L. Common; moist grounds.
- Aster smethystinus*, Nutt. Rare.....
- Aster puniceus*, L. Common; swamps, ditches and wet places.
- Aster prenanthoides*, Muhl. Rare.....
- Aster laevis*, L. Common; dry prairies and roadsides.
- Aster longifolius*, Lam. Rare; swamps and moist woods.
- Aster sericeus*, Vent. Rare.....
- Aster ptarmicoides*, T. & G. Common; prairies.
- Aster ptarmicoides*, T. & G., var. *lutescens* Gray. Rare.....
- Aster salicifolius*, Lam. Common; low grounds.
- Aster paniculatus*, Lam. Common; low grounds.
- Aster Faxonii*, Porter. Rare.....
- Aster diffusus*, Ait. (*A. lateriflorus*, Britton) Common; roadsides and wood borders.
- Aster diffusus*, Ait. (*A. lateriflorus*, Britton) var. *thyrsoides*, A. Gray. Common; roadsides and shaded thickets.
- Aster vimineus*, Lam. Dr. Davis.....
- Aster multiflorus*, Ait. Common; fields and roadsides, in dry soil.
- Aster commutatus*, A. Gray.....
- Aster angustus*, T. & G. (*Brachyactis angustus*, Britton.) Frequent; waste places; introduced from west and spreading rapidly.
- Aster umbellatus*, Mill. (*Doellingeria umbellata*, Nees.) Common; moist prairie thickets and low grounds.

"The Wild Asters of Wisconsin", a paper by Charles E. Monroe, was published as a Bulletin by the Wisconsin Natural History Society, March, 1914. His catalogue, omitting notes and consisting of sixty species and varieties of Asters, follows:

Aster furcatus Burgess
A. leptocaulis Burgess
A. Schreberi Nees.
A. umbelliformis Burgess
A. ambiguus Bernh. in Nees.
A. macrophyllus L.
A. macrophyllus var. *sejunctus* Burgess
A. oblongifolius Nutt.
A. Novae-Angliae L.
A. sericeus Vent.
A. azureus Lindl.
A. Shortii Lindl.
A. cordifolius L.
A. Lowrieanus Porter
A. sagittifolius Wedemeyer.
A. Drummondii Lindl.
A. Lindleyanus T. & G.
A. Lindleyanus var. *comatus* Fernald.
A. laevis L.
A. laevis var. *amplifolius* Porter.
A. concinnus Willd.
A. ericoides L.
A. ericoides var. *villosus* (Michx.) T. & G.
A. Pringlei (Gray) Britton.
A. amethystinus Nutt.
A. multiflorus Ait.
A. multiflorus var. *exiguus* Fernald.
A. vimineus var. *foliolosus* (Ait.) Gray.
A. vimineus var. *saxatilis* Fernald.
A. lateriflorus (L.) Britton
A. lateriflorus var. *glomerellus* (T. & G.) Burgess
A. lateriflorus var. *thyrsoides* (Gray) Sheldon
A. lateriflorus var. *bifrons* (Lindl.) Gray
A. lateriflorus var. *pendulus* (Ait.) Burgess
A. lateriflorus var. *horizontalis* (Desf.) Burgess
A. hirsuticaulis Lindl.
A. missouriensis Britton
A. Tradescanti L.
A. agrostifolius Burgess
A. paniculatus Lam.
A. paniculatus var. *simplex* (Willd.) Burgess
A. paniculatus var. *acutidens* Burgess
A. salicifolius Ait.
A. salicifolius var. *subasper* (Lindl.) Gray
A. salicifolius var. *stenophyllus* (Lindl.) Burgess
A. junceus Ait.
A. longifolius Lam.
A. prenanthoides Muhl.

- A. puniceus* L.
- A. puniceus* var. *demissus* Lindl.
- A. puniceus* var. *compactus* Fernald.
- A. puniceus* var. *firmus* (Nees) T. & G.
- A. puniceus* var. *lucidulus* Gray.
- A. umbellatus* Mill.
- A. umbellatus* var. *pubeus* Gray.
- A. umbellatus* var. *latifolius* Gray.
- A. linariifolius* L.
- A. ptarmicoides* (Nees) T. & G.
- A. ptarmicoides* var. *lutescens* (Hook) Gray.
- A. angustus* (Lindl.) T. & G.

The following is a list of Asters found in Dane County based upon specimens in the University Herbarium and collections made by the author in 1921.

- Aster azureus* Lindl. Sky-blue Aster. Roadsides in sandy soil. Madison, Monona Park; Sun Prairie and Medina Townships.
- Aster junceus* Ait. Rush Aster. Madison. T. J. Hale.
- Aster laevis* L. Smooth Aster. Sandy soil in either partial shade or full sunlight. Madison, Bristol and Sun Prairie townships.
- Aster lateriflorus* L. Starved Aster. Madison. Cheney, September 20, 1891.
- Aster linariifolius* L. Elevated sandy soil. Not common. A. B. Stout, Madison, September, 1892.
- Aster longifolius* Lam. Long-leaved Aster. Common; in lowlands. Madison and Blooming Grove townships.
- Aster multiflorus* Ait. Dense-flowered Aster. White Wreath Aster. Common; dry hilltops or pastures. Madison, Dunn, Middleton, Blooming Grove, Burke and Sun Prairie townships.
- Aster multiflorus* Ait. var. *exiguus* Fernald. Same as last.
- Aster Novae-Angliae* L. New England Aster. Common; low wet soil with little or no shade. Plentiful near Dane County Fair Grounds.
- Aster oblongifolius* Nutt. Aromatic Aster. T. J. Hale. Blue Mounds.
- Aster paniculatus* Lam. Panicked Aster. Moist soil around Madison, Monona Park.
- Aster paniculatus* Lam. var. *acutideus*. Madison. Common in low marshy ground.
- Aster prenanthoides* Muhl. Crooked-stem Aster. Sun Prairie and Medina townships. Not common.
- Aster ptarmicoides* (Nees.) T. & G. Upland White Aster. Dry elevations. Cheney, True and T. J. Hale.

- Aster puniceus* L. Red-stalk Aster. Low rich soil.
Madison, near Turville Farm.
- Aster puniceus lucidulus* Gray. T. J. Hale, Madison.
- Aster sagittifolius* Wedemeyer. Arrow-leaved Aster.
Common. Madison. Dry soil.
- Aster sericeus* Vent. Western Silvery or Silky Aster.
T. J. Hale and True. Madison. Growing on
dry rocky points about Madison. Local.
- Aster Shortii*, Lindl. Short's Aster. Madison. Hale.
- Aster Tradescanti* L. Tradescant's Aster. Michael-
mas Daisy. Wingra Ditch, Fair Oaks.
J. J. Davis.
- Aster umbellatus* Mill. Tall Flat-top White Aster.
Low moist ground. Occasional. Cheney &
True. Madison.
- Aster diffusus* Ait. var. *hirsuticaulis*. Gray.
Common in fields and thickets. Cheney and
True.

This list adds to that of Cheney and True, 1893, the following eight forms of *Aster*:

- Aster Shortii* L.
Aster junceus Ait.
Aster lateriflorus L.
Aster macrophyllus L.
Aster multiflorus var. *exiguus* Fernald.
Aster oblongifolius Nutt.
Aster prenanthoides Muhl.
Aster puniceus lucidulus Gray.

I have omitted from the list two forms listed by Cheney and True:

- Aster turbinellus*
Aster Novi-Belgii

No specimens of *Aster turbinellus* are found in the University Herbarium, those so labeled being erroneously identified and since labeled, by C. E. Monroe, as forms of *Aster laevis*. I have not found *Aster Novi-Belgii* in Dane County. The species has sometimes been confused with *Aster longifolius* or *Aster salicifolius*.

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